

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: EATON POND	Lake Area (ha): 7.00
Town: PITTSFIELD	Maximum depth (m): 5.2
County: Merrimack	Mean depth (m): 1.2
River Basin: Merrimack	Volume (m <sup>3</sup> ): 86500
Latitude: 43°16'12" N	Relative depth: 1.7
Longitude: 71°16'50" W	Shore configuration: 1.17
Elevation (ft): 744	Areal water load (m/yr): 20.62
Shore length (m): 1100	Flushing rate (yr <sup>-1</sup> ): 16.70
Watershed area (ha): 259.0	P retention coeff.: 0.47
% watershed ponded: 0.0	Lake type: natural

BIOLOGICAL:

		9 January 1995	28 June 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 85%	PERIDINIUM 60%
	#2	MELOSIRA 5%	ASTERIONELLA 15%
	#3		SPHAEROCYSTIS 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			260
CHLOROPHYLL-A (µg/L)			15.50
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 56%	KELICOTTIA 68%
	#2	KELICOTTIA 26%	KERATELLA 8%
	#3		NAUPLIUS LARVA 7%
ROTIFERS/LITER		119	610
MICROCRUSTACEA/LITER		10	114
ZOOPLANKTON ABUNDANCE (#/L)		140	790
VASCULAR PLANT ABUNDANCE			Abundant
SECCHI DISK TRANSPARENCY (m)			1.6
BOTTOM DISSOLVED OXYGEN (mg/L)		4.9	0.2
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 2.3  
Hypolimnion volume (m<sup>3</sup>): None  
Anoxic volume (m<sup>3</sup>): 6500

**CHEMICAL:**

Lake: EATON POND

Town: PITTSFIELD

	9 January 1995		28 June 1994		
DEPTH (m)	1.5	3.0	1.5		3.5
pH (units)	5.1	5.4	5.8		5.5
A.N.C. (Alkalinity)	0.8	1.3	1.2		2.1
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		0.05
TOTAL KJELDAHL NITROGEN	0.42	0.59	0.67		0.50
TOTAL PHOSPHORUS	0.013	0.015	0.025		0.026
CONDUCTIVITY ( $\mu$ mhos/cm)	90.2	90.8	87.8		82.9
APPARENT COLOR (cpu)	65	65	70		88
MAGNESIUM			0.68		
CALCIUM			1.7		
SODIUM			13.1		
POTASSIUM			0.43		
CHLORIDE	22	22	20		18
SULFATE	4	4	4		4
TN : TP	32	39	27		21
CALCITE SATURATION INDEX			5.2		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1994**

D.O. S.D. PLANT CHL TOTAL CLASS

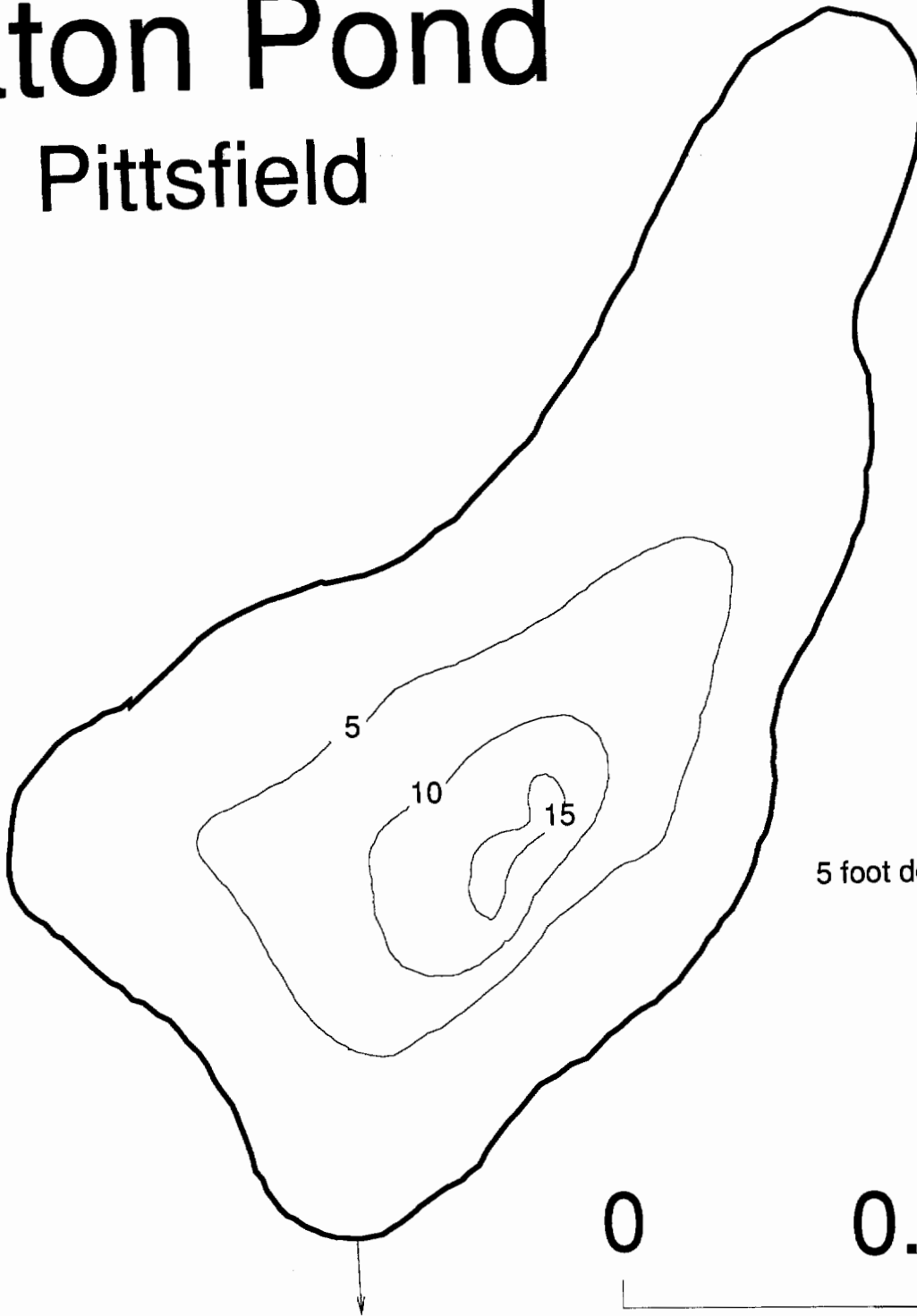
**	4	5	3	12	Eutro.
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**COMMENTS:**

1. No public access; difficult walk-in from Rt. 107 through wetlands.
2. No cottages on the pond -- pretty much an open-water wetland.
3. Sodium and chloride levels suggest de-icing salt drainage from Rt. 107.
4. Dominant genera of wholewater phytoplankton were Sphaerocystis (40%) and Cryptomonas (20%).

# Eaton Pond

## Pittsfield



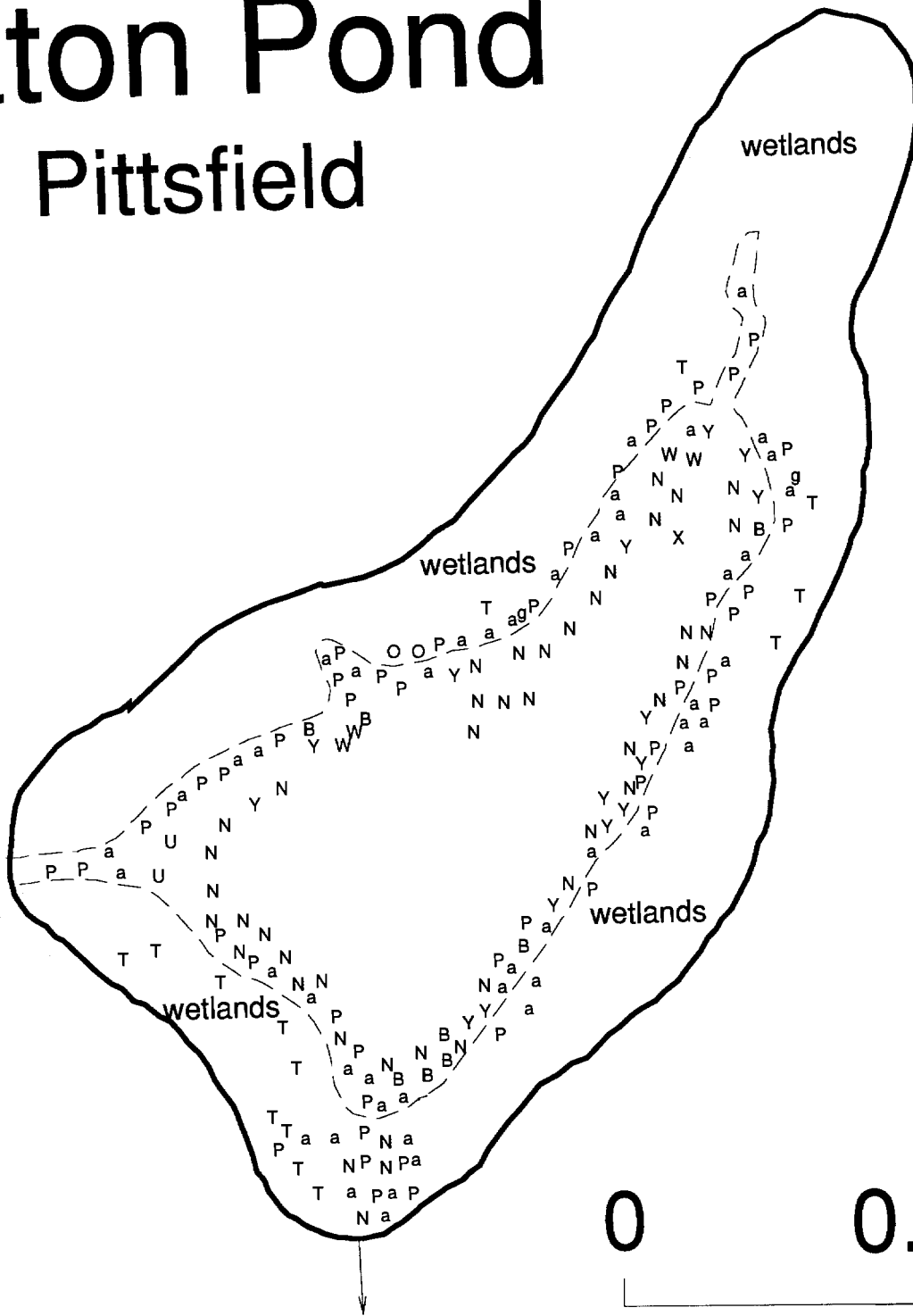
5 foot depth contours

0 0.1  
km

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# Eaton Pond

## Pittsfield



0 0.1  
km

[illegible]